REMARKS

Associate Agents of Applicant appreciate the Examiner for providing an opportunity for the telephone interview on March 16, 2004 and providing valuable suggestions.

In the Office Action, the Examiner rejected the claim based on Baisley (US 6,292,932) and/or Fink (US 6,490,590). Applicant appreciates the Examiner's clear Action, and follows the issues as raised by the Examiner.

(1) Applicant argued that "Baisley does not disclose or suggest any metadata model having a lower layer containing one or more model objects having a lower degree of abstraction and a higher layer containing one or more model objects having a higher degree of abstraction".

In response to this argument, the Examiner stated that this argument "has not been give patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone". Applicant has amended all independent claims so that the structure of the metadata model is clearly recited in the body of the claims.

(2) Applicant argued that "Baisley does not disclose any transformation of object within a model or creation of new objects within a model for presenting the same object or table in its underlying database."

In response to this argument, the Examiner stated that he disagrees with this argument "because any transformation of object _within_ a model is not in the claim, therefore, Baisley teach the claimed creating objects from the lower layer model (col. 3, lines 29-45). Furthermore, the claim only addresses the creating objects from the lower layer but does not explicitly indicate within the same model."

The above amendments to the claims also attended to this objection, e.g., the body of claim 1 now clearly recites "means for obtaining information from a

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model object in a lower layer of <u>a metadata model</u> having <u>the</u> lower layer... and a higher layer" and "means for creating a model object in <u>the</u> higher layer". The article "the" clearly shows that the lower layer and the higher layer reside within the same metadata model.

(3) Applicant argued that "those rules are totally different from the transformations recited in the claims of the present application which transforms objects in a model in a model (sic) into different objects within the same model." "those rules" refer to the set of rules disclosed in column 3, lines 28-29 of Baisley to generate a MOF model from any UML model.

In response to this argument, the Examiner stated that he disagrees with this argument "because firstly the claim does not limit to the same model. Secondly, the business intelligence as in the claim is read by the transformation rules (col. 3, lines 27-28). The business intelligence is the just rule because it does not define or what "business intelligence" is."

Applicant has amended the term "business intelligence" in claims 1, 35, 43 and 44 to "business rules for representing a business concept". The "business rules" were recited in, e.g., original claims 9 and 10, and this amendment is supported by the specification, e.g., on page 12, lines 19-34.

The business rules represent a business concept. Baisley discloses a set of rules for making a transformation from a UML (Unified Modeling Language) model to a MOF (Meta Object Facility) model. Those rules transform one model to another in a different language. Baisley's rules do not represent any business concept, and thus, they are clearly different from the business rules recited in the claims.

(4) The Examiner has stated that "Claims 2-8 are rejected for the same reason as claim 1."

Claims 2-8 depend on claim 1. Accordingly, Applicant trusts that these claims are allowable once claim 1 becomes allowable.

(5) Applicant argued "Baisley does not disclose any metadata model having layers, especially a data access layer, a business layer and a package layer."

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In response to this argument, the Examiner stated that he disagrees with this argument "because Baisley teaches physical and logical layers these can be interpreted broadly as layers claimed (col. 1, lines 46-50)."

As the above amendments to the claims have clarified, the present invention is directed to transformations from a lower layer to a higher layer within a single metadata model. By contrast, Baisley does not disclose any metadata model having layers.

Column 1, lines 46-50 of Baisley discloses "However, if a UML model is carefully crafted as a physical model, with the necessary information included, that model should be automatically convertible to a MOF model". This section discloses a physical model, but does not disclose any model having two layers.

The UML model and the MOF model are two different models using different languages. Baisley clearly states that "The present invention solves this problem by converting a model existing in the UML to a model in MOF ("Meta Object Facility"), which is used in many repositories today" (column 1, lines 35-38). These models are not two layers of a same model.

Baisley discloses a transformation between two models, but fails to disclose any transformation within a model.

(6) Applicant argued that "Fink does not disclose any transformation which can construct model objects of a higher degree of abstraction based on model objects of a lower degree of abstraction."

In response to this argument, the Examiner stated that he disagrees with this argument "because Fink discloses the system that creates the LDM and PDM (col. 6, lines 38-45). This LDM is the lower layer and the PDM is the higher layer since (sic.). The claim does not address that LDM is not a lower layer and the PDM is a (sic) the higher layer; therefore, Fink's teaching reads on the claimed limitation.

Applicant has amended claims 9 and 36 as shown in the attached copy so as to clarify that the data access layer is a lower layer and the business layer is a higher layer, by adding --having a lower degree of abstraction-- after "data access model objects" and adding --having a higher degree of abstraction

compared to the data access model objects-- after "business model objects" in the second paragraph.

This amendment is supported by claim 1 which recites the concept of a lower layer and higher layer, and claim 9 which recites data access to business model transformations. Also, this is described in the specification, such that "The metadata model 15 has the three layers: data access layer 102, business layer 104 and package layer 106, as described above. The transformations 20 also has three kinds: data access (physical) model transformations 112, business model transformations 114, package (presentation) model transformations 116. The transformations 20 transform metadata from the lower abstraction level 102 to the higher abstraction level 106." (page 17, lines 21-26)

Thus, the amended claims clearly recite that business model objects in the business layer (higher layer) is created based on the data access model objects in the data access layer (lower layer). This is opposite to Fink in which the LDM (lower layer) is created based on the PDM (higher layer).

(7) Applicant argued that "Fink does not disclose or suggest use of any transformation to refine business rules."

In response to this argument, the Examiner stated that he disagrees with this argument "because as taught in Fink, DIA creates LDM, PDM and PDD and DDL (col. 8, lines 1-3). Furthermore, Fink's DIA refines the characteristic of the data and identifies the client data sources (col. 8, lines 22-24) and SME refines the business rule metadata based on the created data by the DIA (col. 8, lines 18-22)."

Fink does not disclose any metadata model transformer having a transformation that refines business rules. What is disclosed in column 8, lines 19-24 is that a subject matter expert (SME) or a data information analyst (DIA), both are humans, refines the business rule metadata or characteristics of the data.

Furthermore, Fink does not disclose any transformation that transforms from a lower layer to a higher layer.

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Therefore, neither Baisley nor Fink disclose or suggest any metadata model transformer as claimed in the claims.

(8) The Examiner has stated that "Claims 10-34 and 37-42 are rejected for the same reason as independent claims 9 and 36."
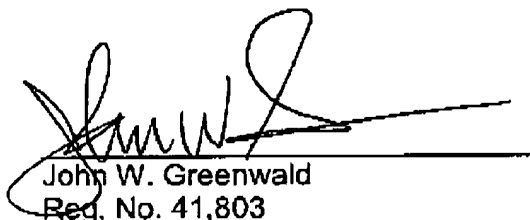
Claims 10-34 and 37-42 depend on claims 9 and 36, respectively. Accordingly, Applicant trusts that these claims will be allowable once claims 9 and 36 become allowable.

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CONCLUSION

Having dealt with all rejections above, Applicant trusts that the present invention is patentably distinguished over Baisley and Fink. Entry of the above amendments and reconsideration of the application is respectfully requested. It is respectfully submitted that all pending claims are now in condition for allowance, and Applicant requests a Notice of Allowance be issued in this case. Should there be any further questions or concerns, the Examiner is urged to telephone Daniel J. Santos to expedite prosecution.

Respectfully submitted,
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